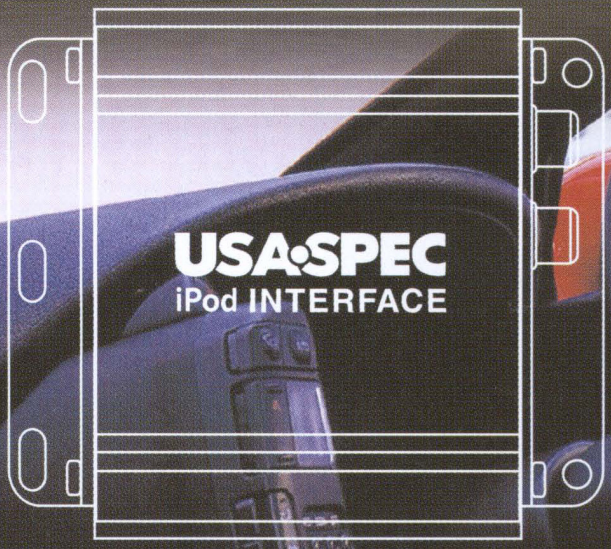
USA·SPEC

Model **PA11-VOL**
iPod to Volvo car stereo Interface



OWNER'S MANUAL

TECH. SUPPORT
(626)336-3836
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Thank you for purchasing **USA·SPEC** product. This manual describes the functions and operation of PA11-VOL **iPod** interface for Volvo. Please read this manual before installing the product in your vehicle.

!!IMPORTANT!!

- ❖ It is strongly recommended that the unit is installed in an accessible location, so that it can later be easily reset or upgraded.

- ❖ **Eject ALL CDs from the built-in CD player or CD changer before installation or disconnect the power to radio!!!**

- ❖ **USA·SPEC** sells its products through authorized dealers so we can insure customers will receive proper services from the dealers. **USA·SPEC** reserves the right to offer technical support or warranty only on products purchased through authorized **USA·SPEC** accounts.

- ❖ It is strongly recommended that buy **USA·SPEC** product from sellers **who provide dedicated phone contact support. USA·SPEC** will not provie technical support or warranty for purchases made through any unauthorized internet sellers.

- ❖ **SAFETY NOTE:** You should always give full attention to driving. Do not operate **iPod** in such a way that distracts you while you are driving.

!!CAUTION!!

- In general, **iPod** has not been designed to withstand temperature extremes in automobiles. Please consult your **iPod** Owner's Manual regarding acceptable operation and storage temperatures.
- Do not disassemble or alter the cable and interface box.
- Make the connections correctly.
- Do not cut away the wire sheath or use the power for other equipments.
  Do not install in locations which might hinder vehicle operation or create hazards for vehicle occupants.
- Having the wiring and installation done by professionals.
- Arrange wiring so it is not crimped or pinched.
- Do not use this product for purposes other than stated for the vehicle.

Section 1. ABOUT YOUR INTERFACE PA11-VOL

This interface connects an **iPod** directly to your Volvo audio system. Its on-board software translates commands from your Volvo CD changer controls into commands that the **iPod** understands. This interface enables the **iPod** to take the place of a Volvo CD changer and provides the following benefits:

- Directs the **iPod**'s audio output to Volvo vehicle audio system for optimal sound quality playback.
- Controls the **iPod** via vehicle's radio and steering wheel controls.
- Charges the **iPod**'s internal battery, and charging stops automatically at one hour after **iPod** is paused.

Future firmware updates for your **iPod** may affect the features and functions described in this owner's manual.

Display of artist and song title information, track search by artist, song title, album or genre are NOT supported. Only the Playlist number and track number are displayed on radio.

This interface is designed as an alternative replacement to the Volvo 6 Disc CD changer unit in your Volvo vehicle. Therefore it is not possible to have the Volvo 6 Disc CD Changer and PA11-VOL iPod interface simultaneously connected to your Volvo radio.

Package Contents

PA11-VOL contains one each of PA11-VOL interface adopter, CAS-VO5i and CB-PA14 cables.

Applications

PA11-VOL is applicable to the following Volvo vehicles equipped with HU series radio:

YEAR	MODEL
01-07	S60, S70, V70, S80, XC70
01-04	S40, V40
01-06	C70

A cable adapter CAS-VOL_NAV is required for vehicles have factory installed navigation system. This cable adapter is sold separately. Plese contact USA-SPEC @626-3363836 or your distributor to order it.

* **USA-SPE** verified the published radio and vehicle application to the best of our ability. Due to uncontrollable factors, **USA-SPEC** can not 100% guarantee every published application. These fartors include variables such as, anomalies within a factory radio, factory radio heretofore unknown to **USA-SPEC** and partial model year changes.

Section 2. HYBRID MODE, DIRECT MODE and AUX OPTION

PA11-VOL provides three ways to control your iPod through the car radio, namely ***Hybrid Mode*** , ***Playlist Mode*** and ***Direct Mode. Playlist Mode*** and ***Hybrid Mode*** share the same DIP switch setting (DIP # 2 = ON) and only one of them will be operative depends on iPod model and its firmware version.

2-1 ***Direct Mode*****:** Search and select music on iPod directly just as you would in portable use. The music will play back through your car stereo. Use the track up/down, fast forward, and reverse buttons on your radio to control music playback. All control functions on iPod are available to use too. Please see Section 4 of this manual for additional information.

2-2 ***Playlist Mode:*** Operate and control the iPod like it is a CD changer. This mode allows you to access five playlists on iPod from radio. iPod screen always diaplay" OK to disconnect" or " Attached to accessory " and iPod 's keypad is not functional or locked. The insructions for Playlist naming and playback controls are in Section 5 of this manual.

2-3 ***Hybird Mode:*** Access Playlists on iPod in the same way as it is in Playlist Mode. Additionally, iPod screen is not locked and the keypads on iPod can be operated directly as if it were in ***Direct Mode.***

2-3-1 If the playback of a Playlist is manually interrupted by using the **iPod** 's key pad, and a song or music in a new category is played, the interface module memorizes the last played track number of the new category. "New category" means file, or folder, or Playlist, or artist, etc. which is different from the Playlist being played. When you return to the same DISC on radio later, the interface module will use the "memorized" track number (note: just the track number, not the last played song in the new category) to playback the Playlist related to this DISC.

2-3-2 When the **iPod** is connected to the interface module, the **iPod** will take approximately 30 seconds to complete its external control mode configuration. During this period of time, the **iPod** screen's display will continue to change until the configuration is completed.

2-3-3 **iPod** touch, iPhone and G3 **iPod** are not compatible to Hybrid Mode. They are compatible to the Playlist Mode and Direct Mode.

2-3-4 **iPod** classic and **iPod** 3rd generation nano are not compatible to Hybrid Mode if is firmware is 1.1 or newer.They are compatible to the Playlist Mode and Direct Mode.

2-3-5 **iPod** video with firmare 1.2.3 or newer is not compatible to Hybrid Mode. They are compatible to the Playlist Mode and Direct Mode.

Note: Disconnect **iPod** from PA11-VOL before switching DIP switch #2 for mode alteration.

2-4 Additional AUX INPUT Option Selection

PA11-VOL interface adaptor is capable of connecting two audio sources to your Volvo radio including the **iPod**. The additional audio source connects to the RCA input jack labeled as AUX INPTUT. If you choose to use AUX INPUT, the DIP switch #1 at the side of adaptor box must be set to "OFF" position (factory presets it at "ON" position).

The audio source at AUX INPUT can be accessed at CD 6 Track 1 after selecting CD changer SOURCE on the radio. CD1 to CD 4 are for accessing Playlists and CD 5 is for accessing all songs on **iPod**.

Operation of AUX

If the "AUX INPUT" option is selected, radio will display "CD 6 Track 1" when DISC button is pressed. "CD 6 Track 1" gives access to the audio source connected to AUX INPUT port.

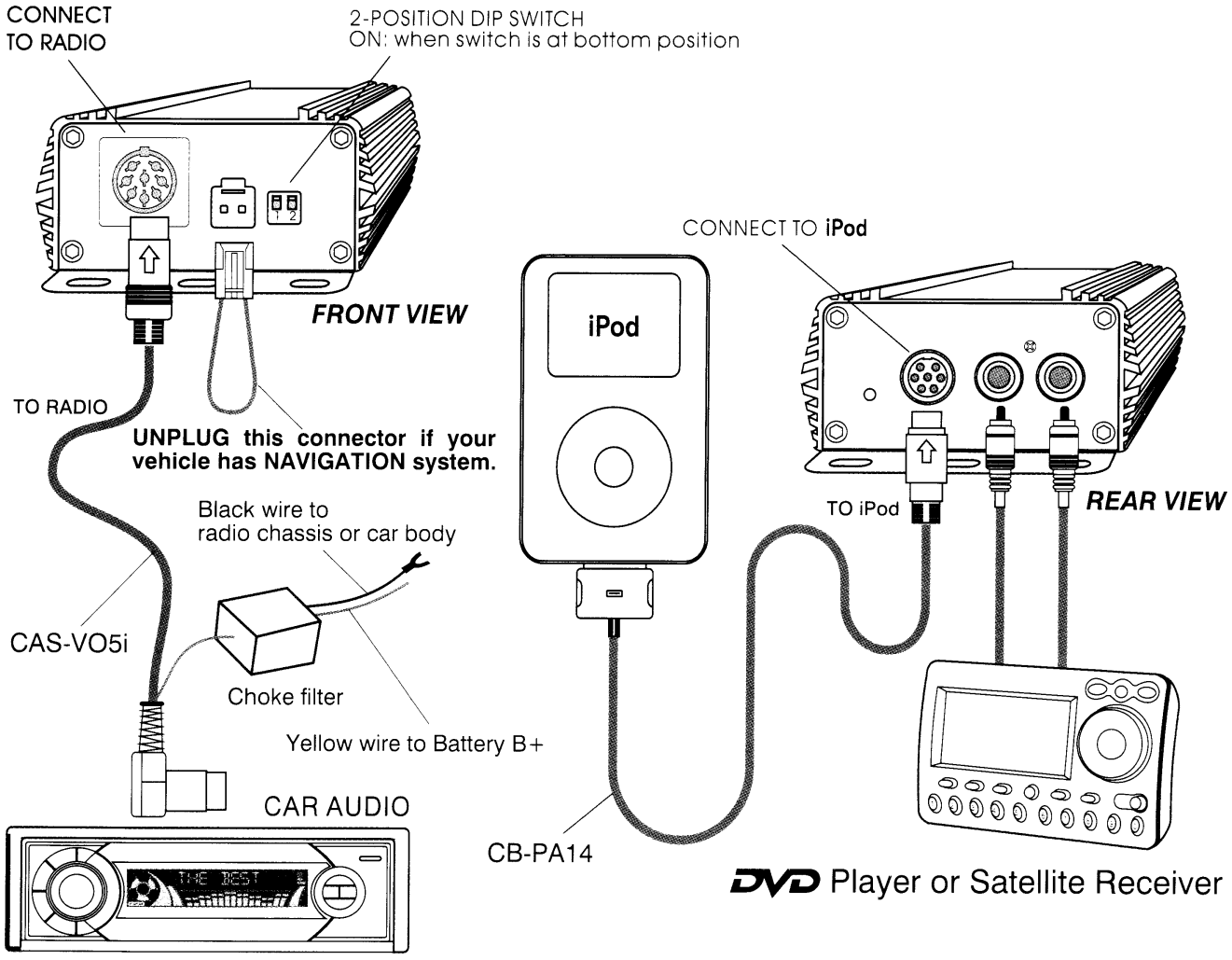
2-5 DIP Switch Setting Summary

DIP Switch	Position	Function
#1	ON	RCA AUX Input Disabled
#1	OFF	RCA AUX Input Enabled
#2	ON	Hybrid Mode or Playlist Mode Selected (depenes on **iPod** firmware versien)
#2	OFF	Direct Mode Selected

Section 3. WIRE CONNECTION

Step 1 - Remove radio from dash. (DO NOT unplug the power harness that is connected to the radio. Some radio models require a SAFETY code to resume radio operation from battery power loss.)
Step 2 - Disconnect existing CD changer from the radio if there is one.
Step 3 - Connect the black wire on CAS-VOL cable to radio chassis or car body.
Step 4 - Locate the battery B+ (CONSTANT POWER) wire on the power harness to radio and connect the yellow wire on CAS-VOL cable to it.
Step 5 - Plug the 90 degree angled DIN connector of the CDL-VO5i cable to the radio.
Step 6 - Set the DIP switch #2 to "OFF" position only if the ***Direct Mode*** is preferred.
Step 7 - Plug the round DIN plug on the other end of the CDL-VO5i to PA11-VOL adapter where it is labeled "RADIO". (DO NOT connect your **iPod** to PA11-VOL prior the completion of this installation step!!!)
Step 8 - Connect the audio output of your auxiliary devices to AUX input jack on PA11-VOL if AUX option is selected.
Step 9 - Plug CB-PA14 cable to PA11-VOL adaptor box where it is labeled " **iPod** ".
Step10 - Reinstall radio to dash.

WARNING!!
Use only the **iPod** connection cable which comes with PA11-VOL interface adaptor.
iPod connection cables from other sources may look similar, but they may damage your **iPod** .



Section 4. CONNECTING & PLAYING of iPod in DIRECT MODE

When the **iPod** is connected to the adaptor, **iPod**'s screen will go blank for few seconds before the normal screen returns. Set source to CD changer on your radio, the audio of **iPod** music will be played back at DISC 5 and Track 1. Adjust VOLUME, BASS, TREBLE and etc. as you would normally do for the other program sources on the radio.

Section 5. CONNECTING & PLAYING of iPod in HYBRID / PLAYLIST MODE

5-1 Connecting iPod to the interface

After connection, the **iPod** will take a few moments to change to external control mode.

5-2 Select iPod mode on VOLVO radio

Turn the Source knob to go to CD Changer mode. Then turn the 1-20/Disc knob until "CD06 TRK-x" appears on the radio display (x is the track number of "Now Playing" song on **iPod**). This display confirms that **iPod** mode has been completely synchronized and activated. Synchronization timing varies according to the number of Playlists on your **iPod**.

If **iPod** was playing previously before radio or ACC power was OFF, and the **iPod** was not disconnected, playback resumes from where it was stopped.

5-3 Disconnecting iPod from the interface

If your **iPod** is disconnected during playback in **iPod** mode, the radio will automatically switch to AM/FM mode.

After disconnecting, **iPod** screen changes from the external control mode screen back to the normal menu. Press and hold the Play/Pause button on **iPod** may get the normal menu back faster.

5-4 Playback of songs on iPod

All audio tracks on your **iPod** will be played (All play) at DISC 6. Track order is determined by the default order on your **iPod**. Selecting DISC1 to DISC 5 on radio will allow playback of 5 Playlists on **iPod**. Every time when **iPod** is connected to the interface adaptor, the playback starts from "Now Playing" song at DISC 6 by default. If **iPod** was playing any of its Playlist right before the connection, the same Playlist will continue to play and repeated at disc 6 but **iPod** will switch to "All" as soon as fast forward button (▶▶) is pressed.

5-5 Selecting a Playlist

Press DISC UP (∧) or DISC DOWN (V) button to select a Playlist. The selected Playlist will begin playing and the Playlist number and track number will be displayed. In rare cases, this may take up to few seconds for the completion of synchronization.

After playing the last song in the current Playlist, playback will start again from the first track of this Playlist.

Playlist naming

- When **iPod** is connected to your radio via PA11-VOL interface adaptor, the adaptor scans all available Playlists on **iPod** and looks for designated VOLVO Playlists which are created for direct access with DISC buttons on Volvo radio. The designated VOLVO Playlists are related to DISC number in the following manner:

  DISC 1: VOLVO1...
  DISC 2: VOLVO2...
  DISC 3: VOLVO3...
  DISC 4: VOLVO4...
  DISC 5: VOLVO5...
  DISC 6: ALL SONGS on **iPod**

The naming of designated VOLVO Playlists in iTune for PA11-VOL interface must be exactly as shown. VOLVO must be in capital letters and there can be no spaces between VOLVO text and number.

However, you may add any text after the correct naming of a Playlist. (i.e. VOLVO1-Jazz, VOLVO3_Favorite3 are acceptable Playlist names for PA11-VOL **iPod** interface.)

- If no designated VOLVO Playlists are created, PA11-VOL adaptor automatically relates to the first five available Playlists on **iPod** to DISC number 1 to 5 regardless Playlist's naming.

- If less than five designated VOLVO Playlists are created, PA11-VOL adaptor automatically fills up the rest of DISC numbers beginning with the first available Playlist on **iPod**.
  Example: if only three designated VOLVO1, VOLVO3 and VOLVO5 Playlists are created, the disc number on radio will be:

  DISC 1: VOLVO1...
  DISC 2: (1st available Playlsit on **iPod**)
  DISC 3: VOLVO3...
  DISC 4: (2nd available Playlist on **iPod**)
  DISC 5: VOLVO5...

The **iPod** interface does not recognize a Playlists that contains no audio tracks regardless of Playlist naming. The **iPod** interface also does not recognize the "On-The-Go" Playlist on your **iPod**.

5-6 Playback function controls

You can control playback with several functions. These functions are generally cancelled when you press select radio buttons; disconnect the **iPod**, or POWER OFF the radio or ACC.

SCAN

Press the scan button, each track in the current Playlist play for 10 seconds. If SCAN is pressed at DISC 6, it will play all songs in **iPod** for 10 seconds each.

Random (Shuffle)

Press the random button (RND), songs within a Playlist will playback in random order. The display of track number will change to start from 1 as it does on the **iPod**.

Repeat
Repeat of a song being played is not supported.

Track Up/Down
Press the track up button to advance to the next track in the Playlist. Press the track down button to go to the beginning of the track that's being played. Press the track down button twice to go to the previous track.

If the track up or track down buttons is pressed quickly in repetition, the track numbers displayed may change unevenly. You may also hear short bits of audio during repeated presses of track up and track down buttons.

If your Volvo radio currently displays a maximum of two digits for track number. Track number 100 will be displayed as 01, Track 101 displayed as 02, track 102 as 03

Changing source to AM/FM, CD, Cassette
When a source other then the **iPod** is selected on radio, the **iPod** will pause.

Note: **iPod** and iTune are registered trade marks of Apple Computer, Inc.
XM is a trade mark of XM Satellite Radio Inc.
Volvo is a registered trade mark of Volvo Group.
Design and specifications are subject to change without notice.

LIMITED WARRANTY

Thank you for choosing a **USA SPEC** product. LTI Enterprises Inc., is committed to providing high quality defect free products. All **USA SPEC** products are tested before leaving the factory and are warranted against defects in materials and workmanship for a period of one year to the original owner. The one-year warranty period begins at the date of manufacture or the date of original installation. Please see installation registration below.

PRODUCTS COVERED :
Products and related accessories supplied by LTI Enterprises Inc. with the brand name of **USA SPEC** are covered by this warranty. Only products purchased in the U.S.A. is covered.

WARRANTY DOES NOT COVER :
1. Damage due to improper installation, operation, accident, negligence, abuse, or not following instructions, warnings, and acceptable industry procedures.
2. Damage caused during the shipment or transportation of the product. All claims of this nature must be presented to the carrier.
3. Damage caused by acts of God, War, or civil disturbance, including without limitation, flood, fire, storms, earthquake or other acts of nature.
4. Any expenses or cost to remove or reinstall products.
5. Any product without the original serial number and factory seal, or has been serviced or modified without the authorization of LTI Enterprises Inc.
6. Any product not distributed by an authorized LTI Enterprises Inc. Dealer.

INSTALLATION REGISTRATION :
To provide warranty coverage from the date of installation the limited warranty registration card with this information must be completed and returned to LTI Enterprises Inc. within thirty(30) days of the installation.

TO OBTAIN WARRANTY SERVICE :
Contact the Customer Service center printed on the back of this manual for assistance. A detailed description of the problem(s) is required for service. Proof of purchase is also required when sending a product for warrant service. If the problem cannot be resolved and the product must be returned for service you will receive an authorization from the service center. The product must be delivered pre-paid to the service center. LTI Enterprises Inc. will, at our option, repair the product or replace it with new or reconditioned product, and if it was shipped to the service center, the return shipping will be pre-paid free of charge provided the repairs are covered by the warranty. The product must be packed securely for shipment to the service center in order to preserve the warranty and prevent damage.

NO IMPLIED WARRANTY, INCLUDING MERCHANTABILITY AND FITNESS FOR USE, APPLIES TO THIS PRODUCT AFTER THE ONE YEAR PERIOD AS DEFINED ABOVE, AND NO OTHER EXPRESSED WARRANTY OR GUARANTEE, EXCEPT AS MENTIONED ABOVE, GIVEN BY ANY PERSON, FIRM OR CORPORATION WITH RESPECT TO THIS PRODUCT SHALL BIND THE WARRANTOR. NEITHER THE WARRANTOR NOR ANY OTHER PERSON, FIRM OR CORPORATION, IS RESPONSIBLE FOR LOSSES OR INCONVENIENCES, OR FOR ANY CONSEQUENTIAL DAMAGES CAUSED BY THE PRODUCT. SOME STATES/PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, AND SOME DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTIAL OR CONSEQUENTIAL DAMAGES.

This warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state and province to province. Some of the limitations or exclusions may not apply to you.

USA·SPEC

Model **PA11-VOL**
iPod to Volvo car stereo Interface

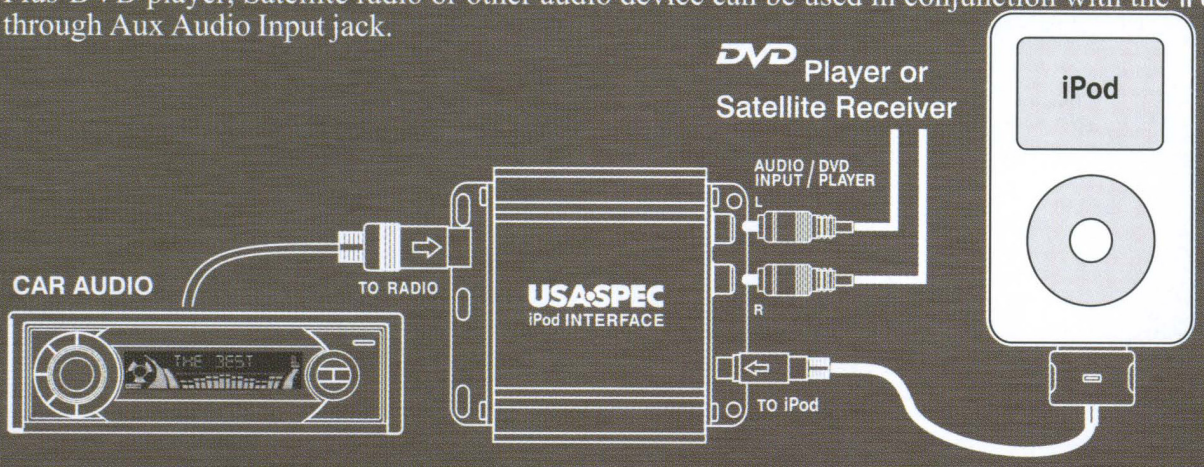
PLAY, CONTROL & CHARGE

Your iPod through Volvo Car Stereo System!

KEY FEATRES

This interface connects an iPod or iPod mini directly to your Volvo audio system with following benefits :

- Connect directly iPod's audio output to Volvo vehicle audio system for optimal sound quality playback.
- Display artist name and song title on rdios equipped with TEXT button. (***This features is supported only in Playlist Mode.***)
- ***Direct Mode***: Search and select songs directly on iPod.
- ***Playlist Mode:*** Select songs and Playlist on iPod with radio's CD buttons only.
- ***Hybrid Mode*** : Playlist and songs on iPod can be accessed by using radio's CD DISC buttons, as well as by using iPod's clik wheel. Note: iPod Touch, iphone, iPod classic (firmware 1.1 or newer), iPod nano (firmware 1.1 or newer) and iPod video (firmware 1.2.3 or newer) are not compatible to Hybrid Mode.
- Maintain current Playlist when switching from portable to in-car use.
- Charge the iPod battery while playing, charging automatically ends at one hour after iPod is paused to prevent car battery drain.
- Plus-DVD player, Satellite radio or other audio device can be used in conjunction with the iPod through Aux Audio Input jack.



Display of artist and song title information, track search by artist, song title, album or genre are NOT supported. Only the Playlist number and track number are displayed on radio.

APPLICATIONS

PA11-VOL is applicable to the following Volvo vehicles equipped with HU series radio:

YEAR	MODEL
01-07	S60, S70, V70, S80, XC70
01-04	S40, V40
01-06	C70

XM is a trade mark of XM Satellite Radio Inc.
Volvo is a registered trade mark of Volvo Group.

LTI Enterprises, Inc. 167 Mason Way, Unit A2. City of Industry, CA91746
www.usaspec.com or www.usaspec.net Tel(626)336-3836

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Design Change Notice (101508)

(for Model PA11-VOL)

In order to improve the handling of Audiobook and to support streaming music downloads on iPhone or iTouch, the Hybrid Mode is deleted and design changes are also implemented to Playlist Mode and Direct Mode.

Playing iPod with **revised** Playlist Mode and Direct Mode as follow:

In case of configuration A: (in Playlist Mode and RCA AUX is OFF or Disabled)

1. When iPod is connected to interface and CD CHANGER SOURCE on radio is selected, iPod will begin play at DISC #5. iPod screen will show "OK to Disconnect" or "Accessory is attached". iPod will continue play the tracks in ***the*** Folder which was played prior to iPod is connected to interface adaptor. As soon as the last track of ***the*** Folder is played, iPod will go to the first track in All Songs folder.
2. When return to DISC #5 from a Playlist (i.e. any DISC among DISC #1 to DISC #4), DISC #5 will continue play the track where it was left but points to All Songs folder regardless which Folder or Playlist was played at DISC #5 previously.
3. **When do DIRECT control from iPod is desired, select DISC #6 on radio. iPod's screen and click wheel will be unlocked and switch folder or playlist as you would in portable use of iPod.**
   - *Application Tip: Use DISC #6, iPod Direct to listen the stream music downloads from iPhone or iTouch (wi – fi).*
   - Song title display on radio is not supported in iPod Direct.
   - When return to DISC #5 (All Songs) from DISC #6 (iPod Direct), DISC #5 will continue play the track and folder of iPod being played at DISC #6 until the last track of the Folder is completed.
4. If iPod has more than 4 Playlists were created with iTune, please refer to the **Playlist Naming** section of interface manual.
5. Use DISC up and DISC down knob on radio to change disc or playlist.

In case of configuration B: (in Playlist Mode and RCA AUX is ON or Enabled)

1. When iPod is connected to interface and CD CHANGER SOURCE on radio is selected, iPod will begin play at DISC #4. iPod screen will show "OK to Disconnect" or "Accessory is attached". iPod will continue play the song tracks in ***the*** Folder which was played prior to iPod is connected to interface adaptor. As soon as the last track of ***the*** Folder is played, iPod will go to the first track in All Songs folder.

2 When return to DISC #4 from a Playlist (i.e. any DISC among DISC #1 to DISC #4), DISC #4 will continue play the track where it was left but points to All Songs folder regardless which Folder or Playlist was played at DISC #4 previously.

3 **When do DIRECT control from iPod is desired, select DISC #5 on radio. iPod's screen and click wheel will be unlocked and switch song or playlist as you would in portable use of iPod.**
   - *Application Tip: Use DISC #5 iPod Direct to listen the stream music downloads from iPhone or iTouch (wi – fi).*

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- Song title display on radio is not supported in iPod Direct.
- When return to DISC #4 (All Songs) from DISC #5 (iPod Direct), DISC #5 will continue play the track and folder of iPod being played at DISC #6 until the last track of the folder is completed.

6. If iPod has more than 3 Playlists were created with iTune, please refer to the **Playlist Naming** section of interface manual.
7. DISC #6 is for the RCA AUX.
8. Use DISC up or DISC down knob on radio to change disc or playlist.

Summary of Playlist Mode Operation :

In the case of A: **DIP switch #1=ON** **DIP switch #2 =ON**	
At....	***Radio Plays***
Disc 1	Playlist # 1
Disc 2	Playlist # 2
Disc 3	Playlist # 3
Disc 4	Playlist # 4
Disc 5	All Songs
Disc 6	iPod Direct

In the case of B: **DIP switch #1=OFF** **DIP switch #2 =ON**	
At....	***Radio Plays***
Disc 1	Playlist # 1
Disc 2	Playlist # 2
Disc 3	Playlist # 3
Disc 4	AllSongs
Disc 5	iPod Direct
Disc 6	RCA AUX

PA11-VOL

iPod, iPhone, iTouch and iTune are registered trade mark of Apple Computer Inc.